

**Lesson:** Scaffolds Part 1

- Lesson Objectives:**
- Describe the general safety requirements for scaffolds.
  - Identify the different types and components of scaffolds.
  - Implement the proper safety precautions and uses of scaffolds.

- Topics**
- Scaffold Requirements
  - Scaffold Types
  - Proper Use of Scaffolds

### **Topic: Scaffold Requirements**

All employers and employees using scaffolds must become familiar with OSHA specifications. This topic covers OSHA's general safety requirements for working with scaffolds on construction sites and should help you:

- Explain the scaffold requirements for capacity, construction, planking, and access
- Identify scaffold training requirements for all workers

#### Topic summary:

Please take a moment to review these key points before you continue with the next topic.

- Scaffolds are elevated, temporary work platforms commonly used on work sites. Their hazards and safety requirements are covered in Subpart L of the OSHA Standards for Construction.
- Each scaffold and scaffold component must be able to support its own weight and at least four times the maximum intended load that it will be expected to carry. Components such as suspension ropes and hardware on suspension scaffolds must be capable of supporting six times the maximum intended load.
- Each platform on a scaffold must be planked and decked as fully as possible.
- Mixing scaffold components produced by different manufacturers is not recommended.
- Permitted types of access for scaffolds include ladders, stair towers, ramps and walkways, and integral prefabricated frames. Cross bracing for access is prohibited.
- Employees are required to receive training in the correct procedures for dealing with electrical conditions, fall protection, material use, and load capacities.

### **Topic: Scaffold Types**

While there are many safety requirements developed by the manufacturers of scaffolds, all employees must be protected from hazards under OSHA standards. This topic will explain the different types of scaffold systems and their components so that you should be able to:

- Identify the types, components, and proper use of supported scaffolds
- Identify the types, components, and proper use of suspension scaffolds

#### Topic summary:

Please take a moment to review these key points about support and suspension scaffolds before you continue with the next topic.

Support scaffolds are platforms that are supported by legs, outrigger beams, brackets, poles, uprights, or some other type of rigid support to prevent swaying and displacement. Several of the key OSHA requirements are:

- Supported scaffolds with a height-to-base width ratio of more than 4:1 must be prevented from tipping by using restraint devices, such as guying, tying, or bracing. In addition, a firm foundation is maintained by placing scaffolds on base plates and mud sills.
- Employers are required to determine at each stage of erection and dismantling if safe access and fall protection can be provided.
- Front-end loaders and similar pieces of equipment can be used to support scaffold platforms only when the manufacturer designs the equipment specifically for this purpose.
- Forklifts may be used only if the entire platform is attached to the forks and the forklift does not move horizontally when workers are on the platform.

Suspension scaffolds contain one or more platforms supported from an overhead structure by ropes or other non-rigid means. Two specific safety requirements are:

- Inspect ropes for defects prior to each work shift and after every occurrence that could affect a rope's integrity.
- Use access ladders, ramps, walkways, or similar surfaces when scaffold platforms are more than 24 inches above or below a point of access. When using direct access, the surface must not be more than 24 inches above or 14 inches horizontally from the surface.

In your construction site, you often are exposed to flying material chips, falling objects, heat, light, and other hazards requiring special PPE. Personal protective equipment (PPE) for the head, ears, hands, eyes, foot, body, and respiration are designed to prevent or lessen the severity of injuries in your workplace.

### **Topic: Proper Use of Scaffolds**

While you learned the general safety requirements for scaffolds, this topic covered the proper use of scaffolds to ensure adequate fall protection.

Having completed this topic, you should be able to:

- Identify safety requirements for fall protection systems -- especially the use of guardrail systems
- Recognize safety procedures for erecting and dismantling scaffolds
- Determine the safety needs for personal fall arrest systems, falling object protection, and inspections
- Specify safety measures presented by the weather, power lines, and manufacturers, suppliers, and vendors

#### Topic summary:

Please take a moment to review these major points before you continue with the next topic:

- Guardrail systems must follow OSHA's criteria for use of top rails, midrails, toeboards, hoisting, and holes.
- At each stage of erecting and dismantling a scaffold, OSHA requires safe access and fall protection.
- Consider all OSHA regulations for personal fall arrest systems before using the fall protection devices on a job site.

- The OSHA standards cover special precautions for protecting workers from falling objects.
- A competent person must consider safety measures for unsafe conditions caused by bad weather, energized power lines, and the manufacturer's safeguard recommendations.